LY-800 User mannual

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Query function

1, Position query

After received position query instructions, the terminal would returns the current position of the vehicle information. Location information include: time, latitude, longitude, speed, position, orientation marks, vehicles and terminal state, etc.

2, Parameters status query

After received the parameter states query instructions,the terminal would return to the current state of the vehicle information. State information include: position information, vehicle state, terminal state, set parameters, mileages etc.

3, Version query

After received the version query instructions,the terminal would return the current version of vehicle information. Version query include:terminal model, terminal chip types, software version, software release time.

Settings

1, Fixed time/ set times to return position information settings

Set designated vehicles according to the fixed time/times to send the location information to the center through UDP.

This instruction request the terminal use interval as the time interval, return location information, up to 65535 times positioning information.

2, Fixed time return location information’s time interval settings

This settings include return the location information’s time interval when the car power on and off.

When the car power on, the time interval of the return location information, the factory default is 30 seconds.
When the car power off, the time interval of the return location information, the factory default is 0 seconds.

*If the car power off, the return location information’s time interval is 0 seconds, whatever the car is power on and off, the return location information’s time interval according to the car power on’s time interval.

If the car power off, the return location information’s time interval >o seconds, the terminal would return the location time interval according to the car power on and off seperately.

Note: When the car power on, the time interval of the return location information’s minimum unit is 3 seconds.

3, Over-speed alarm threshold settings

After you set up the over-speed alarm’s threshold, if the vehicles’ speed is > the threshold valve, and the time would stays for 10 seconds, it will alarm.

The factory default for closed terminals (i.e. set value 0)

Set the value is more than 10 km/h is valid.

4,Parking overtime alarm valve setting

After set up the parking overtime alarm valve, when the car’s speed is 0,and the time stays or greater than the overtime alarm valve,it would alarm.When you set up the overtime alarm valve,you must set the valve more than 1 seconds is valid.

The factory default for closed terminals (i.e. set value 0)

5, Electronic fence Settings

Terminal support maximum 50 electronic fence with a range of rectangular fence, When you drive in and out of the fence, the terminal will upload a hint.

When the terminal issued the line node to the appointed vehicles,it would restrict the vehicles only can drive in the permitted line range.At present,it only support 1 line node.

6, IP and port setting

The monitoring center can change the terminal IP number and port number at any time. After you change the terminal,the new IP and port number would take effect immediately.

After you changed the IP port,the terminal would reply response information to the original IP port, and rebuild connection request to the new IP port at the same time. When the terminal send the TCP connection to the monitoring center,it would discard(not close) the original connection,the connection of monitoring center is still exist. So the monitoring center GPRS server also need to check whether there is repeatedly connecting, if there is repeatedly connecting,you need to clear the terminal’s original connecting,otherwise the GPS server can’t bear it because of opening too much linkage.

8, TCP heartbeat interval setting

When you set designated vehicles according to set time upload the location information, this position information would use TCP to upload the information, this instruction main as TCP heartbeat instructions

Host default for 3 minutes. This parameter would not lost when the power off.

After the establishment of the TCP connection by mobile router keep period of time, if the TCP transmission interval is too long, the terminal would not reserve the connection, the terminal only can resend the connection to the center.

9,The host terminal output control mode settings

Set the output control mode.

There are two ways: oil control mode and the speed control hint mode,the terminal default oil way

StrValu: the setting value is Ascall code, no fixed length.

When set to "CARON", it can activate the overspeeding hint way, when the overspeed alarm open,it would output the signal hint. The red line of the terminal would connect with the alarm speaker or buzzer.
When set to "CAROFF",it can activate the oil way ,it means the monitoring center would send “cut off the oil” instructions,it would use terminal to control the output signal to cut off the oil way of the car.

11, Short message debugging ways settings

In order to take easy way to debug the terminal and testing the terminal’s working state, the terminal increase the short message debugging instructions. When you using text messages to read parameters, you don’t need not to input password, but if you want to change the machine parameters you have to input the correct password.

Control

1, Remote restart

When the monitoring center remote send the restart instructions, the terminal will automatically cut off the power and to restart. The directive is mainly used for communications in normal condition and other abnormal condition, it would cut off the power of terminal and restart. In order to ensure the terminal can work normally. After restart the terminal,the mileage statistics will reset

2, Remote controlling oil

This function mainly divided into cut off the oil and supply the oil

The monitoring center allots stop oil instructions, terminal will directly cut off the oil of the vehicles,the car will shut down.

The monitoring center send the supply oil instructions, the terminal will supply the oil of the vehicles.

3,Driving mileage initialization

Set the designated vehicles mileage

Miles: 3 bytes, show HEX, the unit is meters, range: 0 ~ 0 xFFFFFF x000000 such as 0 stands for 0 x000000

4,Sending and receiving dispatching information and extension instructions

The monitoring center would send the dispatching text information or extension instructions to the terminal.
This information send as ASCALL code or BG2312 code,the content of the short message would not exceed 240 bytes

5, Supports remote software upgrade

Manufacturer shall be in accordance with the operating

Alarm

1, Overspeed alarm witnesses settings

After you set up the over-speed alarm’s threshold value, if the vehicles’ speed is greater than 10km/h, and the time would stays for 10 seconds, it would alarm.The overspeed signs are inclued in the location informations.

Alarm way: When the first alarm,it would upload a message.The rest alarm would according to the scheduled time resending time’s interval to upload the message.

Cancel alarm way: You should send the cancelling alarm instructions to the terminal and the vehicles’ running speed is smaller than overspeed alarm witnesses value.Send the cancelling overspeed instructions and close the overspeed alarm.

2,Parking overtime alarm valve setting

After set up the parking overtime alarm valve, when the car's speed is 0,and the time stays or greater than the overtime alarm valve,it would alarm.Parking overtime's sign is inluded in the location infomations.
Alarm way: When the fist alarm,it would upload a message.The rest alarm wold according to the scheduled resending time's interval to upload the message.
Cancel alarm way: Send the cancelling alarm instructions and the car's running speed is greater than 0

Send the cancelling alarm instructions and close the parking overtime alarm.

3, GPS antenna short circuit alarm

GPS antenna state signs are included in the location informations.According to the time interval to upload it.

4, Terminal power off alarm

Power off alarm status symbol included in power in the location information. According to the time interval upload it.

5, Custom alarm (high and low sensor alarm)

This type of terminal support 1 road low and 1 road high sensor

Sensor alarm status signs included in the location information.According to the time interval upload it.

6, Robbery/SOS alarm

Rob/SOS alarm sign a included in the position in the information.When you press the alarm button above 0.5 seconds, such as in robbery/SOS alarm conditions ,it would alarm.If you under the alarm condition,it would cancel the alarm. When it alarms,the button's light stays on,when cancel the alarm,the button's light off.
Alarm way: When the fist alarm,it would upload a message. It is according to time interval to upload the message.

Cancel alarm way: The monitoring center send the calcelling alarm instructions.

7, Geo- fence alarm

After you set up the Geo-fence,when you run in and out of the fence,the terminal would upload a hint information.

Alarm way: Triggered alarm.

Other

1 Mileage statistics

The in all moving position of GPS, the unit is m

The maximum is 16777215 meters. When it achieve to maximum value,it would re-caculate the statistics from 0.

Statistical conditions: The vehicles power on and the GPS effective positioning.

2 Blind area

When the vehicles in GPRS signal blind area, the terminal will automatically save the location data according to schedule resending time (When the car power on), after the vehicles received the GPRS signal, the terminal would automatically send the saved datas that in blind area to the monitoring center,it can save 1500 datas at most.

5 SMS or platform remote inquires the terminal parameters

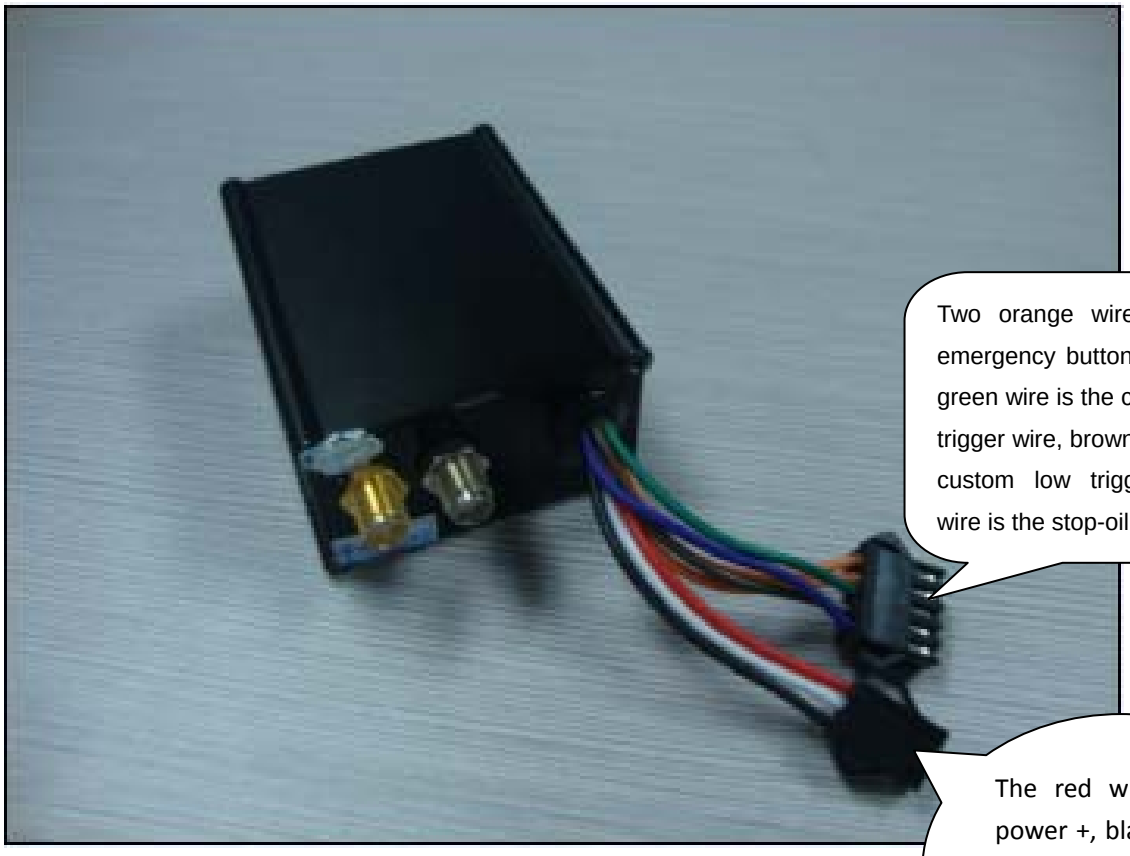
You can check the terminal's parameter configuration through SMS or GPRS instrucitons.These parameter configurations include parameters of the terminal, such as: TCP/UDP, the terminal code, resending time, APN, Error record, etc.

LY-800 setting method specification

LY-800 setting method: GPRS, UDP or TCP+UDP

1.The host device:

2.The host device wire diagram


Two orange wires are the emergency button wire, dark green wire is the custom high trigger wire, brown wire is the custom low trigger, purple wire is the stop-oil wire
The red wire is the power +, black wire is ground wire, white wire is ACC-checking wire

3.Debug procedure

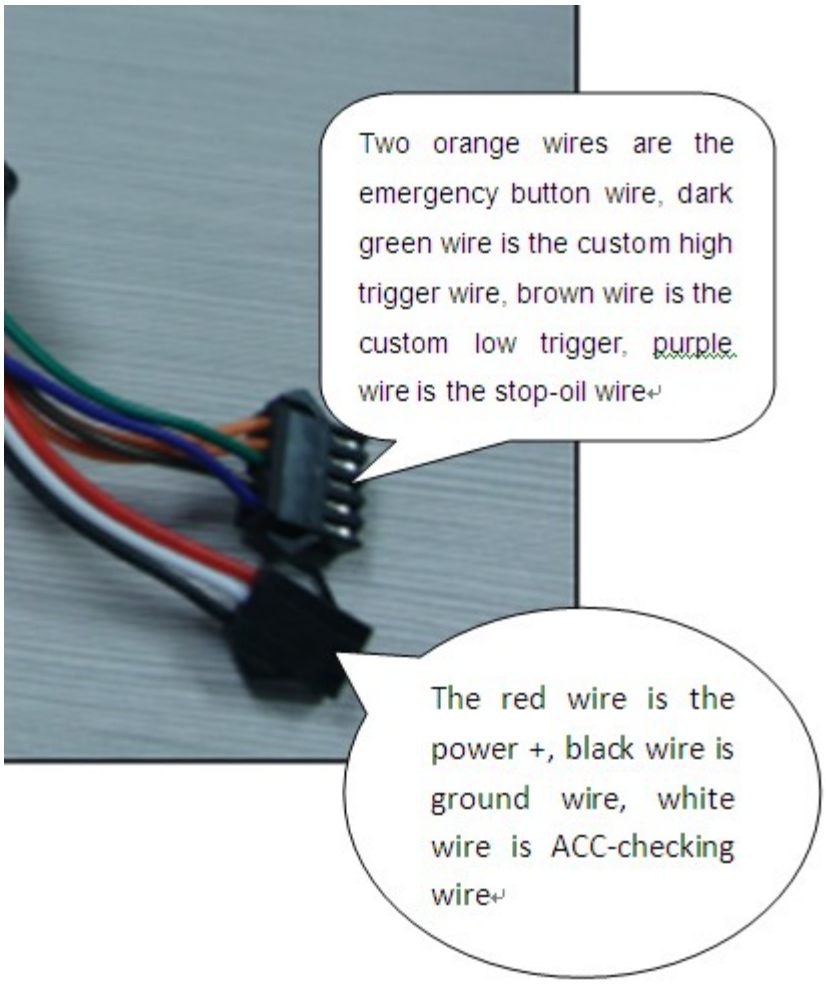
1. Install wire-connection
2. The terminal set IP/Port/terminal No. (SMS setting)

3. The monitoring center record vehicle’s materials.

4. Testing the detailed function.

4.Procedure detailed specification

1) The device wire-connection specification:


Two orange wires are the emergency button wire, dark green wire is the custom high trigger wire, brown wire is the custom low trigger, purple wire is the stop-oil wire
The red wire is the power +, black wire is ground wire, white wire is ACC-checking wire

Status lights specification:
LY-800 model have two lights beside the terminal: GPS (yellow light) and GSM (red light)
GPS（yellow light）:

① Effective positioning（0.5 seconds light on/off, light quick flashing）

② Invalid positioning（one seconds light on/off, light slow flashing）
Reasons： waked GPS signal, didn’t search the satellite signal; antenna un-connected(the signal lights keep lighting)

Solution: check whether GPS antenna covered by some metal objects; whether the copper coil of the port break off.

③ GPS module broken (the lights keeps lighting off)

Reasons: The lights tube broken/GPS module broken; suggest return the terminal to factory for repairing.

GSM light (red)

① GPRS connect to the center successfully (0.5 seconds light on/off, light flashing quickly)

② SIM card register GPRS failed（one seconds light on/off, light flashing slowly）

Solution: Check whether the SIM card have enough telephone charge, or whether you open the GPRS service, and check if you set the wrong IP and port.

③ GSM module broken/the light tube broken (lights keeps go out)

Suggest return the terminal to factory for repairing.

④ No signal/can't read the SIM card (lights keeps go on)

Solution: Do not truck loading in the blind area, or change another SIM card.

If these methods are not OK, you can return the terminal to factory for repairing.

Set online status: SMS settings

2) The terminal SMS setting online instruction specification:

You can use any telephone to send the configuration instruction to the terminal, and the instruction specification as followed:

<SPBSJ*P:BSJGPS*T:219.133.034.198,6690*U:219.133.034.198,6688*A:CMNET*N:13412345678>

We use * to divide each parts, use<> to stands for the head and the tail

SPBSJ: stands for the fixed format head

P: stands for the password, different manufacturer use different password , 6 byte length

T:TCP IP and por, xxx.xxx.xxx.xxx stands for IP, if there aren't 3 numbers, you should add 0 before the number, such as: 219.011.073.255 stands for 219.011.073.255；pppp stands for port ,the maximum is 65535, such as 1100. When you set the port to 0, stands for the terminal do not use TCP.

U: UDP IP and port, the format as the TCP format

A: stands for APN parameter, such as CMNET

N: stands for the terminal number such as 13800000000

The server TCPIP is：219.123.10.34 Port：11001

The server UDPIP is：219.123.10.34 Port：6788

Public network APN:CMNET

If you set the terminal number to 13412345678 the SMS as followed:

<SPBSJ*P:BSJGPS*T:219.133.034.198,6690*U:219.133.034.198,6688*A:CMNET*N:13412345678>

But sometimes, some monitoring center server's software only support UDP, then you can set the terminal like this:

The server UDPIP is：219.123.10.34　Port：6788
Public network APN: CMNET
If you set the terminal number to 13412345678　the SMS as followed:
<SPBSJ*P:BSJGPS*T:219.133.034.198,6690*U:219.133.034.198,6688*A:CMNET*N:13412345678>
At this time, the car terminal receive the data by TCP+UDP method.

3）Platform setting and recording specification:

LY-800 material recording as followed:

***Vehicles' No.:12312312**
***The terminal No.:13512312312**
***SIM card No.:13512312312**

Note: You should set the terminal No.:13512312312 the same as N you set by SMS.
<SPBSJ*P:BSJGPS*T:219.133.034.198,6690*U:219.133.034.198,6688*A:CMNET*N:13512312312>
After you input the material to the platform, you can named the vehicles by the C/S version to see if the terminal will return data.

5. The terminal working status query and normal fault specification

1) **Check or return SMS parameter**

When you set the terminal parameter or use SMS to check terminal parameter, the terminal will return good configuration parameter information
Format：
<BSJ*T:xxx.xxx.xxx.xxx,pppp*U:yyy.yyy.yyy.yyy,uuuu*A:apn*N:13412345678*GP:V*CGREG:S*CSQ:B*AO:T1*AF:T2*CS:H*TH:00*GPS:N*ER:%>
We use * to divide each part, use <> to stands for the head and the tail
BSJ: stands for the fixed format head
T:TCP IP and port
U:UDP IP and port
A: stands for the APN parameter, such as CMNET

N: stands for the terminal No. such as 13800000000
GP: stands for whether online, V=OK stands for online，V=NO stands for offline
CGREG：stands for GPRS register status, S=1 or 5 stands for registered
CSQ：stands for the signal intensity B=0~31(31 the strongest signal) 或 99(n signal)
AO: stands for fixed time upload position data's time interval when ACC open, T1=3-65535 unit: second
AF: stands for fixed time upload position data's time interval when ACC close, T2=1-255 unit: minute
CS: stands for over-speed threshold H=0-255 Unit: km/h
TH: stands for call limit
GPS: stands for receiving satellite numbers N=0-16
ER: stands for the last error code of the car terminal

SMS function:

1. Mobile phone to locate the position:

You can editor SMS "position" to the terminal LY-800, the terminal LY-800 will send the longitude/latitude of that position to your mobile phone.

The second way that you can send SMS "map" to LY-800, it will reply the longitude/latitude of google link to your mobile.

2. Control oil way:

You can send SMS "stopoil" to LY-800, the LY-800 will cut off the oil way of your vehicles.
You can send SMS "supplyoil" to LY-800, the it will supply the oil of your vehicles.

3. Control circuit

You can send SMS "stopele" to LY-800, LY-800 will cut off the circuit of your vehicle.
You can send SMS "supplyele" to LY-800, it will supply the circuit of your vehicle.

4. Over-speed alarm

Set over-speed: Send SMS "speed+space+080" to LY-800, LY-800 will default the over-speed value as 80km/h.
Cancel over-speed: Send SMS "nospeed" to cancel over-speed.

5. Restart the terminal

You can send SMS "restart" to LY-800, the terminal will restarted.

6. Set ACC ON:

Set ACC ON: Send SMS “ACC ON+space+0120” to LY-800, LY-800 will default ACC time as 120s

Set ACC OFF: Send SMS “ACC OFF+space+0150” to LY-800, LY-800 will default ACC time as 150s

7. Change the time zone:

The terminal factory time zone is zone 8, if you want to change to your local time zone, pls editor SMS “zone+space+local time zone” to send to LY-800, then LY-800 will return SMS “zone is ok”, that means you set time zone successfully.

For example: Berlin is East area, so the SMS is 1. SMS “zone 1”, this is stands for Berlin’s time zone.

USA is West area, so the SMS is “zone -5”

(Such as: East time zone: 1,2,3,4,5……, West time zone: -1,-2,-3,-4,-5…..)

8. When the vehicle is over speed, LY-800 will send over-speed alarm SMS “overspeed” to LY-800. If you’ve set 5 administrator numbers, LY-800 will send this SMS to your 5 administrator numbers.